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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,672	04/14/2004	Volker Diehl	250693US0	4906

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OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT PAPER NUMBER

1764

DATE MAILED: 01/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/823,672

Applicant(s)

DIEHL ET AL.

Examiner

Virginia Manoharan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g., typographical, grammar, idiomatic, syntax and etc. Applicants' cooperations are requested in correcting any errors of which applicants may become aware in the specification.

The abstract of the disclosure is objected to because of the inclusion of legal phraseology often used in patent claims such as "comprises" in line 6. Correction is required. See MPEP § 608.01(b).

The disclosure is objected to because a brief description of the drawing(s) as set forth in 37 CFR 1.74 is missing from the specification.

The drawings are objected to because of the following reasons:

(a) Figures 1 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). [Note the recitations at page 6, lines 14-18 and page 6, lines 32-36].

b). Element (3) does not appear to be a T- support nor a U-shaped support in Figs. 2 and 4. [Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be

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canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance].

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). The preamble of claim 1 recites "A thermal separating process between at least one gaseous stream ..and a liquid stream", however the body of the claims does not mention any process steps for separating the streams.

b). The claimed "the support elements installed in the separating column" in claims 3-4, 7 and 8 lack proper antecedent supports in the claims.

c). The claims or at least part of the claims are recited in passive rather than active steps, e.g., the recitation of "by being covered" in claim 1 .

d). It is unclear how and what covers are used for the claimed T and U shaped support elements especially they are not mentioned in the specification.

e). Claim 2 is at odds with the claim from which it depends, i.e., claim 1. Claim 2 recites " liquid stream ascending in the separating column" , whereas claim 1 recites " liquid stream descending in the separating column" which is inconsistent therewith. [ A dependent claim incorporates every features of the claim from which it depends and cannot change nor orient the limitation already recited in the independent claim ].

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Disclosure of Admitted Prior Art as illustrated , e.g., by EP- A 937488, EP-A1044957, DE-A10300816 and EP-A 759316.

At page 4, lines 26-30, applicants admit that EP-A 937488 and EP-A 1044957 describe processes for rectifying mixtures comprising (meth)acrylic monomers, in which the inner surface of the rectification column, including the mass transfer tray underside, is sprayed with polymerization-inhibited reflux via nozzles. Applicants further admit, page 4, lines 31-37, that "DE-A 10300816 relates to thermal separating processes of mixtures comprising (meth)acrylic monomers, in which the separating column containing a sequence of mass transfer trays is operated in such a way that the gaseous stream moving upward, as it passes through the passages of the mass transfer trays, entrains small liquid droplets of the polymerization-inhibited liquid phase disposed thereon and sprays them upward".[Compare with claim 2].

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Moreover, applicants admit, page 7, lines 30-32, that the mass transfer trays in the separating columns which are used today are composed of several planes which are secured on or to supports, as described, for example, by EP-A 759316, wherein said support is a simple T-support (page 6, line 5). Note also page 6, line 14 for the known double T-support; and further at page 6, line 33, for the claimed U-shaped supports.

[CF with claims 3-4 and with claims 7-8]. The process admitted to be known by applicants differs from the claimed invention in that claim 1, for example, recites "wherein parts of the surface of the internals which are in the shadow of the sprayed descending liquid stream are removed from the shadow region by being covered".

However, it would have been obvious to one of ordinary skill in the art to cover or completely remove any element from the system when its used is not required.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a). Resetarits et al discloses a V-shaped downcomers in a fractionation tray.
- b). Chuang discloses a fractionation tray.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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